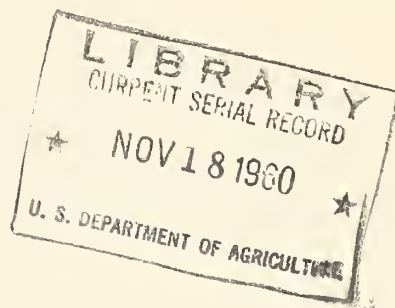


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Uses of Marketing Information by Farmers in Michigan

U. S. DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service
Marketing Economics Research Division

PREFACE

Marketing information is essential to farmers in planning their production and marketing activities. Much information of value for these purposes is published, yet little is known of the extent to which farmers and others receive and use this information. Consequently, the Agricultural Marketing Service has undertaken research to measure the receipt and use of marketing information, particularly current market news, by farmers and others.

This is a report of some of the major findings of a project conducted by the Michigan Agricultural Experiment Station under contract with the Agricultural Marketing Service. The data are for surveyed Michigan farmers only, but the findings should be of interest to many State and private agencies concerned with providing information for farmers in other States, particularly those in the East North Central Region.

This study was planned and directed by Dr. Joel Smith, formerly with Michigan State University and now with Duke University. Other reports on this project will be issued by the Michigan Agricultural Experiment Station.

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SUMMARY

Nearly all of the 375 farmers included in the study reported receiving marketing information at the time of the survey. Most of them used a combination of sources that resulted in their getting current market news and longer run situation, trend, outlook, and other production and marketing information. Only 10 farmers reported they were not getting market information of any kind.

A large proportion of the farmers obtained market information through personal contact with dealers, other farmers, truckers, route drivers, and Government personnel. Information from these sources was used primarily as supplement to information received through mass media, such as radio, newspapers, and magazines. Information obtained by personal contact was to a large extent of the current market news type. This situation may be a reflection of some lack of localized market news in the available mass media. Collection and dissemination of accurate localized market news by an impartial party such as a Federal or State agency might have reduced the need to rely on personal contacts. On the other hand some farmers preferred to receive information by personal contact.

Information on current prices and on price outlook was received by more farmers than any other type of information. Aside from use as the topic of discussions and the source of agricultural education, after-sale evaluation of prices received for farm products was the function marketing information most frequently served. Use of non-localized information received from mass media was important for all purposes examined in this study. However, local information obtained through personal contacts was used more for the making of marketing decisions than for other purposes. Marketing information from the mass media was used more by farmers after the sale of their products, for evaluating the prices received, than before or during the selling process.

Deciding where to sell and the price to accept were most frequently mentioned as reasons for finding marketing information useful. This kind of information was found to be useful by 56 out of 59 farmers for whom the price to accept was the limiting and most important decision in the marketing process. For those concerned primarily with where to sell, 43 of 65 farmers found marketing information of assistance in making this decision. Kind of product, manner of pricing, and a number of other circumstances seemed to be related to the usefulness of marketing information in decisions on where to sell and the price to accept.

It is apparent that marketing information is obtained and used by farmers, and many of them will make considerable effort to get information directly if it is not disseminated by mass media. Thus, it is possible that the correct comparison for public agencies to make in deciding whether to continue information services or start new ones is that of costs to public agencies of collecting and disseminating such information as compared with the costs of collection by each interested farmer, marketer, and consumer rather than the comparison of direct costs to value in use.

USES OF MARKETING INFORMATION BY FARMERS IN MICHIGAN

By John O. Gerald, agricultural economist
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INTRODUCTION

Farmers need adequate and reliable marketing information to help them make better marketing decisions. Since farmers must rely on the information they can obtain in making pricing and selling decisions, there is also need for objective evaluation of the adequacy of what they are getting and using.

This project was initiated to determine the amount and kinds of marketing information received by farmers in the lower peninsula of Michigan and the uses which farmers are making of marketing information.

For this study, marketing information is defined to include all information of relevance to production and marketing decisions made by farmers. However, current market news, situation, and outlook information, and statistics on production were emphasized.

Information was obtained by personal interviews with farmers. A questionnaire was designed to get data on a large number of characteristics of the farms and the farmers, where farmers get information, types of information they obtained, and their uses of it.

The sample was a probability area sample of Census-classified farms on the lower peninsula of Michigan. Interviews were completed with 375 farmers. A major consideration in sampling was to insure at least a minimum number of cases in each of the several classifications chosen for analysis. Farmers of various types were interviewed. One hundred and forty-eight were classed as dairy farmers; 115 as cash crop; 52 as livestock; and the remaining as general or mixed. Milk was the main product for 89 of the farms; corn for 78; wheat for 43; hogs and pigs, 15; beef, 12; cream, eggs, and poultry, 15; and other miscellaneous products, 123. One hundred and sixty-six farmers did some nonfarm work. Sixty-nine had annual average gross farm incomes of less than \$3,000; 63 between \$3,000 and \$4,999; 115, between \$5,000 and \$9,999; and 64, \$10,000 or more. In terms of information media availability, 62 farms were in areas having a very high availability; 134, high; 105, medium; 44, low; and 30, very low. The last item, media availability, took into account radios and daily newspapers only. Areas were defined relative to the average conditions for the lower peninsula of Michigan.

SOURCES AND TYPES OF INFORMATION RECEIVED

Sources

More than two-thirds of the farmers in the survey reported that they received marketing information from three or more media, as the following tabulation shows:

<u>Number of media</u>	<u>Number of farmers</u>
None	10
One or two	107
Three or four	195
Five or six	53
Seven or eight	<u>10</u>
Total	375

In addition, many farmers reported two or more sources within a single medium. For example, 33 farmers read 2 daily newspapers for marketing information, 98 listened to 2 or more radio programs, and 182 read 2 or more magazines. The more important combinations of media were:

<u>Media</u>	<u>Number of farmers</u>
Daily newspapers, radios, and magazines only	36
Daily newspapers and magazines only	18
Daily newspapers, radios, magazines, and dealers only	15

Other media frequently mentioned included weekly newspapers, friends and neighbors, television, truckers and route drivers, and Government personnel such as county agents, extension workers, and others. Among magazines, the general farm journals were mentioned much more frequently than were the specialized commodity magazines.

Personal sources of information were important to Michigan farmers. Dealers in agricultural supplies and commodities were a source of marketing information to 101 of the 375 farmers interviewed. Friends and neighbors provided a source for 120, truckers and route drivers for 44, and Government personnel for 29. This extensive use of personal sources of information may be a reflection of the dearth of collected and summarized information of a local nature that was readily available for public dissemination by the mass media in Michigan. ^{1/}

Daily newspapers and radios were by far the most important sources of day-to-day marketing information or what is usually referred to as market news. It was expected that the number of farmers receiving market news and other marketing information through these media would be related to the number of media available in the communities in which farmers were located. This expectation did not seem to materialize (table 1), and it must be concluded that current information media availability was not a limiting factor in receipt of current marketing information for the area studied. Inasmuch as mail delivery for dissemination of magazines, weekly newspapers, and other printed reports is general, the communication structures for information from these outlets were assumed on the whole to be adequate, and were not considered in classifying communities as to media availability levels.

^{1/} For a comprehensive account of such sources of market news, see:
 Smith, Joel. Dealers, Truckers, and Route Drivers as Market News Sources. Quart. Bul., Mich. Agr. Expt. Station, Mich. State Univ., East Lansing, Mich., pp. 331-339. Nov. 1959.

Table 1.--Number of farmers, among the 375 interviewed in the lower peninsula of Michigan, receiving market news and other current information: By media, and media availability

Media availability ^{1/}	Daily newspapers	Radios	Both	Neither	Total
Very high	13	10	32	7	62
High	29	29	60	16	134
Medium	18	24	46	16	124
Low	6	14	21	4	45
Very low	4	6	18	2	30
Total	70	83	177	45	375

^{1/} Townships were classified by number of newspapers having 25 or more subscribers residing in the township and by number of radio stations, the programs of which could be satisfactorily received. These two variables were then reduced to standard scores, and the scores were added to give an overall classification for each township.

Marketing information received by farmers could still be increased. Although only 12 percent of the farm operators surveyed did not obtain marketing information from either radios or daily newspapers, 41 percent received information from one of these two major sources. Further, 69 farmers reported reading one or more daily newspapers regularly from which they did not get any marketing information. Television was reported as a marketing information source by only 16 percent of the surveyed farmers, probably due to lack of market news programs on many television stations.

Nonetheless, the time and effort spent by these farmers in obtaining marketing information indicate that they attach considerable importance to such information. The variations in types and sources of information received by the farmers indicate that the farmers themselves vary in their regard of the significance of the information and in the uses they make of it.

Types

Michigan farmers received many kinds of marketing information. Some order was achieved by classifying the types into current market news; situation and outlook information of a longer run nature; and other information of costs, production methods, market structures, and so forth. Types as classified in this manner have a highly differentiated pattern of both sources and uses to Michigan farmers. However, the classifications had no meaning to most farmers, the terms market news, marketing information, and so forth evoking identical responses. Consequently, the survey determined what information was received by each respondent, and the items were classified later as to type.

Most of the surveyed farmers obtained both current market news and outlook and situation information. Of the 364 for which the information received from all sources could be classified, only 7 received information limited to the outlook, situation, and costs types, and only 52 received only the current market news type. The remaining 305 received some of both types.

The items of information reported being received from each source by each farmer were classified by type, and summaries were then made of the numbers of farmers reporting items of one or more types of information from each medium (table 2). Radios, daily newspapers, and magazines were mentioned most frequently as media. The types of information received through each of these media included both current market news and outlook and situation analyses, but the patterns of responses differed considerably, as would be expected. Most farmers listed only current market news items as received from daily newspapers (as well as truckers and route drivers, weekly newspapers, and friends and neighbors). On the other hand, most farmers mentioned no current market news types when referring to items of information received from magazines and Government personnel such as county agents. Although a few farmers said their radio stations did not broadcast current market news, almost half of those reporting the use of radio said they received by radio current market news and other types of information useful in decision making. For example, 24 percent of those mentioning radio as a source cited current weather reports as useful. Twelve percent reported hearing of new production techniques over radio.

Table 2.--Percentages of Michigan farmers receiving various types of marketing information ^{1/}

Medium by which information received	Current market news only	Only types other than current market news	Both types of information received	Number using medium
Daily newspapers	78.9	1.2	19.0	247
Radios	50.7	2.2	46.8	262
Truckers and route drivers :	68.1	22.7	4.5	44
Weekly newspapers	60.4	15.3	21.9	91
Friends and neighbors . . . :	52.5	13.3	23.3	120
Dealers	49.5	18.8	28.7	101
Televisions	49.1	21.3	22.9	61
Magazines	7.2	75.9	16.0	262
County agents and other :				
Government personnel . :	---	89.6	---	29

^{1/} Percentages do not add to 100 across due to inability to classify some responses and due to rounding.

The data in table 2 do not indicate the importance of each type of information or of each medium to Michigan farmers, nor do they indicate relative frequency of receipt or use. They simply show information availability by medium and the types of information obtained from each by Michigan farmers. These data verify that communications media are getting marketing information to farmers. Previous measures of extent of dissemination of marketing information cannot be interpreted as a measure of extent of communication. ^{2/}

Ninety-seven percent of the surveyed farmers reported receiving current market price information. Current prices for specific products at specific markets was the single type of information most frequently reported as received from all media except magazines and Government personnel. Price outlook was the second most frequently mentioned type, 32 percent; production techniques, 30 percent; short-run trends, 25 percent; costs and sources of inputs, 21 percent; supply outlook, 20 percent; and marketing organizations and practices, 16 percent.

^{2/} Agricultural Marketing Service. Survey of Radio and Television Market News Broadcasts. U. S. Dept. Agr., AMS-29. Dec. 1956.

USES OF MARKETING INFORMATION

The active, conscious use of marketing information by farmers, marketing agencies, and others in making production and marketing decisions is the aim of those who collect, analyze, and disseminate information. However, dissemination of information through generalized mass media permits its receipt by almost all of the public. Communication theorists claim that some consequences may result from the receipt of information by a person whether or not he actively or consciously uses the information in making decisions.

For this study, primary emphasis was placed on determining whether or not information the farmer considered to be relevant for certain selected decision-making functions was received at an appropriate time, and whether or not he used the information in making his decisions. Some study was also made of other functions served by (or consequences flowing from) the receipt of marketing information, particularly those that might directly influence improvement of programs for collection and dissemination of marketing information on a mass scale.

In total, eight decision-making uses were specifically examined, including the following: Deciding whether to expand, contract, continue, or discontinue production of a certain product, and what enterprise combinations to make; what form of the product to produce; where and when to market; and what price to accept. Eleven other uses were examined, but open-ended questions revealed the existence of many others. The more important of these 11 uses were: Uses of marketing information as a means of general educational improvement; as a means of fulfilling a desire for such information; as a topic of discussion; and as a means for evaluating in general collectors and disseminators of marketing information.

Determining the relevance of information to decision-making and to other functions for each farmer required a combination of general and specific questions. One problem of this analysis was that Michigan farmers included in this survey were almost all classified as multiple-product farmers. Very few specialized in the production of a single commodity. Further, 179 of them had as their major or largest source of farm income a commodity such as milk or eggs that is produced continuously and marketed regularly on a daily, biweekly, or weekly schedule, and for which production and marketing decision making has been routinized. Other commodities were chosen for some of the specific marketing questions in such cases. Thus, questions which were specific as to commodity for marketing situations (i.e., when, where, to whom, and amount to sell, etc.) often related to a commodity producing only a small proportion of the gross farm income. The functions served by market news and other marketing information for such farmers may be somewhat more general in nature than they are for specialized farmers. Studies of these functions in a few specialized farming areas are now underway.

Sixty-three percent of the 375 farmers reported that decision-making functions could be affected if marketing information were not available. Only 13 percent reported that nonavailability of information would affect other functions, but these percentages probably reflect an inclination of farmers to mention active uses or functions and to forget the more passive, latent functions of marketing information. For example, specific questioning later in the interviews revealed that marketing information served as a topic of discussion for 82 percent of the farmers and as a source of agricultural education for 70 percent. These uses, making no measurable direct contribution to forward production planning or to orderly marketing, were classified as latent consequences of the existence of marketing information collection and communication structures. Certain other latent functions were important also, one of these being the evaluation of the United States Department of Agriculture in general respects in accord

with the respondent's evaluation of its information programs. Such evaluations were usually favorable to the Department in those cases where the respondents were aware of the Department's role in making marketing information available. However, 59 percent of the 365 farmers receiving marketing information were not aware of the Department's role, and another 15 percent were uncertain as to whether it had a role. 3/

Past studies have shown the subjective nature of decision making relative to forward production planning. Decisions of such nature are subject to such uncertainty in many cases that they sometimes appear to be made by whim or at random. Even good outlook information cannot resolve all of the factors a farmer needs to take into account in planning enterprise combinations, particularly where these plans commit the farmer for more than one production period to a certain combination. Decision making becomes more specific as the time period required for effecting the decision diminishes. For example, the form in which to sell a product is often considered an element of the complex marketing decision owing to the relative rapidity with which the form may be converted. In other cases, form is a longer-run decision that affects investment, flexibility, etc. Without distinguishing between those two aspects, roughly half of those farmers making conscious decisions as to the form in which to market found marketing information useful as compared with the less than one-fourth of those planning enterprise combinations. Current prices of the alternative forms and of the inputs required for conversion were the items of information used by more than 90 percent of these.

Forward production planning may be of major concern to farmers of the general or mixed-enterprise type. Most of the farmers surveyed in Michigan carried on two or more farming enterprises on their farms. These farmers could shift to some extent among enterprises from year to year whereas more specialized farmers would not. Nonetheless, only 18 percent of the 363 farmers who could have used currently received marketing information for production planning over a past period recalled doing so. Twenty-two percent recalled that they had used currently received information in deciding on their most recent production plans. These data are for all farmers who made conscious decisions either to change or not to change their enterprise combinations. Only 14 percent consciously used marketing information in some measure to decide on changing enterprise combinations. About half of these chose new combinations that resulted in a decrease in their commitment to farming. This was done by decreasing investments or by increasing flexibility of the farm, which made the unit more salable.

Marketing information was important to farmers in deciding on various aspects of the complex marketing decision. Only 13 percent did not receive market news or other current marketing information for use at sale time. Of these, one-fourth said that they contracted ahead as to price, volume, etc.; one-fifth reported no relevant information available; one-fifth reported no alternatives among which to decide; one-seventh believed that marketing information would be irrelevant to their decisions; one-fourteenth trusted their dealers to make their decisions for them; and one-tenth stated miscellaneous or noninterpretable reasons. Of the 305 who reported receiving and using current marketing information at sale time, 96 percent reported receiving current prices for the specific product sold; 12 percent received information on short-run trends, outlook, and forecasts; 3 percent got information on current market supplies and demands; and 2 percent used information on grading and test requirements. An average of 1.1 types of information were obtained at sale time by farmers. As compared to overall receipt of marketing information by type and source as reported earlier, local prices obtained from potential buyers were dominant at sale time. Of

3/ Agricultural Marketing Service. Major Statistical Series of the U. S. Department of Agriculture--How They Are Constructed and Used. Market News. Vol. 10, Agr. Handbook 118. Sept. 1960.

the 293 farmers who received prices at sale time, 68 percent received local prices and 29 percent received nonlocal prices. Although radio and newspapers were still the most important sources of current market news received at sale time, potential buyers provided a considerable part of this (93 farmers received information from potential buyers at sale time).

Marketing information was used in deciding when to sell by 43 percent of 161 farmers who sold all of their product in one lot. However, 65 percent of those not using marketing information stated that they had no choice of time to sell because of the perishable nature of their product, nonavailability of storage or processing facilities, etc. Of those 95 who had a choice on time to sell, 69 percent used information in deciding, compared with 31 percent who did not.

Information about the reasons for selecting the outlets chosen was obtained from 322 farmers. Price was mentioned as a reason by 47 percent, but multiple reasons were given by some. An average of 1.6 reasons were given. For the 151 mentioning price as a reason, 27 percent reported that previous experience indicated that the price at the particular outlet chosen would be satisfactory; 25 percent obtained price information from the outlet; 17 percent from radio programs; 13 percent from neighbors or other farmers; and 10 percent from newspapers. Satisfaction with the price offered was expressed by 225 farmers, three-fourths of whom based their reaction on marketing information received. Again, local prices were most important, and radios and newspapers served as the most important sources of price information. Of 77 farmers who expressed dissatisfaction with the prices received, only one-third based their dissatisfaction on marketing information. Relation of price to cost of production was the chief reported reason for dissatisfaction (44 of the 77 farmers).

Another use made of current market news was in evaluating the prices received. Two hundred and thirty farmers reported checking on prices after their sales were consummated. Only two other functions were served by marketing information for larger numbers of farmers: As a topic of discussion (306) and as a source of agricultural education (263). The daily mass media (radio and newspapers) were reported as the chief sources of the market news used in price checking. These large-scale media were employed more for followup checking than for any other aspect of the sale decision. The average number of sources employed (1.5) was higher than for any other function. It would appear that there may be more extensive use of marketing information and of the large-scale media after the sale has been completed than before or during the selling process. Most of the 145 farmers who gave reasons for such checking indicated that their prime reason was simply evaluation of the particular sale--a form of self-education.

Some of the aspects of the sale decision obviously must be made by the farmer simultaneously and compatibly with other aspects. For example, decision on where to sell may limit the form of the commodity, or vice versa. For this reason, the above descriptions of uses of marketing information in selling do not yield a useful measure of the importance of marketing information to the complex marketing decision. Table 3 shows farmers' answers concerning the aspects of the sale decision considered to circumscribe choices in other aspects or to determine simultaneously what other actions could be taken. Either the most important aspect of the sale or the usefulness of marketing information in the decision could not be determined for 35 of the 305 receiving market news or other current information prior to and at the time of the sale. Marketing information was useful to a majority of those wanting to know where to market or whether the offered price was acceptable. Less than half of those for which the other three aspects were most important found information of use.

Table 3.--Farmers' reports as to the most important aspects of the sale decision and the usefulness of marketing information in the decisions

Most important aspect of sale	Farmers for which aspect was most important	Marketing information useful	
		Yes	No
		Number of farmers	
Form to sell	46	21	25
Amount to sell	10	4	6
Where to sell	65	43	22
When to sell	90	44	46
Acceptableness of offered price	59	56	3
Total	270	168	102

CHARACTERISTICS OF USERS OF MARKETING INFORMATION

Wheat farmers, in particular, were concerned with when to sell but did not find marketing information useful in helping them decide when to sell (table 4). Field bean producers were clustered in the same aspect grouping, but a majority of these used information in deciding when to sell. The largest number of corn, hog, and beef cattle sellers was in the group particularly concerned with where to sell and believing marketing information useful.

Table 4.--Most important aspect of the sale decision and the usefulness of marketing information in the decision, by type of product sold

Most important aspect of sale ^{1/}	Usefulness of information	Wheat	Field beans	Corn	Hogs	Beef cattle	All other products	Total
		Number of farmers						
Form to sell	Yes	2	2	0	3	1	13	21
	No	1	0	1	5	3	15	25
	Subtotal	3*	2*	1*	8	4	28*	46
Where to sell	Yes	11	1	8	11*	6*	6*	43
	No	8	3	3	1*	1*	6	22
	Subtotal	19	4	11*	12	7	12	65
When to sell	Yes	10	9*	0	10	5	10	44
	No	20*	2*	0	8	5	11	46
	Subtotal	30*	11	0*	18	10	21	90
Price acceptability	Yes	19	9*	11*	7	3	7*	56
	No							
Total		71	26	23	45	24	68	257

^{1/} Due to the small number of farmers for which amount to sell was the limiting aspect of the sale decision, this grouping is not included here.

*Number in group is larger or smaller than might be expected in a random distribution. However, tests of significance were not made.

Relatively few of those selling at auction were classified as being most concerned with price acceptability (table 5). This seems logical when the nature of the outlet is considered. On the other hand, 14 of the 15 farmers selling at auction who were most concerned with where to sell used marketing information in deciding. This also is inherent in the nature of auctions, demand-supply relationships varying widely at a given auction over time and between auctions at a given time as the number of buyers and sellers on hand changes.

Table 5.--Most important aspect of the sale decision related to manner of pricing and usefulness of marketing information in the decision

Most important aspect of sale	Information of use	Manner of pricing	
		Set by buyer at delivery	Competitive bidding at auction
		Number of farmers	
Where to sell.	Yes	18	14
	No	17	1
Price acceptability. . .	Yes	26	8
Total in manner of pricing group. . .		112	85

Sellers of livestock were the only group of farmers who used nonlocal prices much more than local prices. They also relied on radios and newspapers for getting information on prices to a much greater extent than did sellers of grains, and a larger proportion used marketing information in deciding when to sell and what price to accept (table 6). Grain sellers were equally divided between local and nonlocal prices but obtained them almost exclusively by personal contact.

Table 6.--Relationship of types of product sold to type of price information received at sale time, source of this price information, and uses made of it

Type of product sold and gross farm income	Price information		How obtained		How used		
	Local	Nonlocal	Mass media	Personal contacts	When to sell	Where to sell	Price to accept
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
Livestock	31	69	52	48	56	22	68
Grain ^{1/}	50	50	27	73	42	31	50
Field beans	48	52	37	63	56	9	38
Dairy animals	53	47	53	47	36	9	51

^{1/} Includes wheat, corn, and other grains.

Enough livestock sellers were interviewed to permit an analysis similar to that in table 6 by gross farm income classes. A larger proportion of the higher income group (\$7,500 and up) of livestock sellers depended on nonlocal price information (83 percent versus 63 percent). Reliance on mass media (radios and newspapers) for price information at the time of marketing increased with income, as follows:

Gross farm income class	Number of farmers in income class	Percent using radios and newspapers
Less than \$3,000	30	37
\$3,000 - \$7,499	39	53
\$7,500 and up	24	63
Total or average . .	93	52

Selling functions served by marketing information also seemed to be related to the degree of enterprise specialization. Fifty percent of those farmers who reported sale decisions for a major product used market information in deciding when to sell, compared with only 44 percent of those reporting for some product other than the major one. Large price changes from time to time provide incentives for careful timing of sales. On the other hand, deciding on acceptability of a price offer requires comparison of a specific price with unknown alternatives. Continuing evaluation of prices at alternative outlets may lead to patronage of one or a few outlets on a regular basis because of their usual price advantage. Forty-four percent of major product sellers used experience and other noncurrent information bases for making such decisions as compared to only 39 percent of sellers reporting for minor products who used current price and other market news reports.

Overall, marketing information served 2.75 decision-making functions (production and marketing) and 5.24 other functions per farmer in the survey. The number of both types of functions served, as well as the number of media used, increased as average gross farm income increased (table 7). However, only 12 percent of the variation in the number of decision-making functions served was associated with the variation in the number of other functions served. In other words, the number of decision-making functions served by marketing information for a particular farmer was not indicative to a significant degree of the number of other functions also served for him. It should be emphasized that the numbers reported here apply only for those 8 decision-making and 11 other functions selected for this analysis. The number of functions information could conceivably serve is unknown. Application of the same procedures in other farming areas or for different products in Michigan or for other selected functions would possibly give different results. About the same degree of relationship existed between total functions served and number of media used as reported above for the two types of functions served.

Table 7.--Average number of uses per farmer made of marketing information and average number of media per farmer used as sources of information related to gross farm income

Item	Annual gross farm income			
	Less than \$3,000	\$3,000 - \$7,499	\$7,500 and up	All incomes
Uses				
Decision-making	2.30	2.94	3.08	2.75
Other	4.54	5.11	6.42	5.24
Total	6.84	8.05	9.50	7.99
Media used	2.76	3.47	3.55	3.24

Marketing information served more decision-making functions on the average for general and mixed and livestock farmers (type of farm, not the product to which questions concerning information used in making marketing decisions were directed)

than for any other type of farms found in the survey (table 8), and fewest for dairy farmers. Similarly, more nondecision-making functions were served for livestock farmers on the average, but conversely for the general and mixed type of farmers. Farmers operating general and mixed types of farms used more media than the average of all farmers.

Table 8.--Average number of uses per farmer made of marketing information and average number of media per farmer used as sources of information related to type of farm

Item	Type of farm				
	General and mixed	Dairy	Livestock	Cash crop	All
Uses					
Decision-making	2.98	2.58	2.96	2.79	2.75
Other	4.77	5.07	5.67	5.48	5.24
Total	7.75	7.65	8.63	8.27	7.99
Media used	3.46	3.22	3.33	3.13	3.24

A number of other characteristics of farmers were studied to determine if they were related to their use of marketing information. In order to tie these characteristics to specific uses, those farmers for which form in which to sell, where to sell, or when to sell was the most important aspect of the sale decision were selected. Within each aspect, farmers were divided into those who used information in solving their most important marketing problem and those who did not. Table 9 summarizes the findings relative to age, education, number of dependents, gross farm income, nonfarm income, and liabilities. Those using information in deciding on their most important selling problem were, on the average, younger, better educated, had more dependents, larger gross farm incomes, more liabilities, and fewer worked off farm than those not using information. None of the differences in average characteristics were by themselves statistically significant, but the directions of all the differences are consistent with the generalization that the greater the significance of the farmer's income to the farmer, the greater the use of marketing information in some aspect of the marketing decision.

Table 9.--Use of marketing information in selling related to selected characteristics of farmers

Characteristics of farmers	Information used for deciding			Information not used for deciding		
	Form to sell	Where to sell	When to sell	Form to sell	Where to sell	When to sell
Average age	50.5	48.6	47.7	52.9	51.5	49.6
Average number of dependents	2.7	2.9	2.8	2.4	2.5	2.8
Average annual gross farm income	\$5,643	\$6,959	\$6,403	\$4,677	\$5,702	\$5,766
Average years of school completed	9.2	9.7	9.3	8.8	9.6	8.6
Percent with no nonfarm job	67	60	68	60	38	52
Percent having liabilities	57	57	73	48	41	67
Percent having liabilities in excess of one-half of assets	29	24	29	9	14	24

